

Name: _____

MAI Control Systems Test

Section A: Multiple Choice Questions (8 marks)

1	The special nerve endings in your skin are called: A reflexes B receptors C stimuli D synapses	2	Which of the following statements about hormones is INCORRECT ? A Hormones are living cells. B Hormones are carried to all parts of your body. C Hormones only target particular cells. D Hormones are released directly into your bloodstream.
3	The nerve signals travel through the nervous system via cells called: A effectors B neurons C receptors D synapses	4	Which of the following is NOT produced by the ovaries? A insulin B oestrogen C progesterone D testosterone
5	The gaps between neurons are called: A effectors B neurotransmitters C reflexes D synapses	6	Which of the following effects can be caused by a hormone? A growth of body hair B lowering of blood sugar C increase in blood pressure D all of the above
7	All hormones are produced in the: A bloodstream B endocrine glands C brain D pancreas	8	Which of the following substances is NOT a plant hormone? A auxin B gibberellin C cytokinin D glucagon

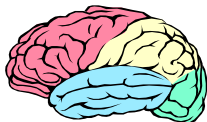
Section B: Short Answer Questions (42 marks)

- 9** Arrange the following in order from smallest to largest:
systems, cells, organs, tissues

2

- 10** Explain the difference between the central nervous system and the peripheral nervous system.

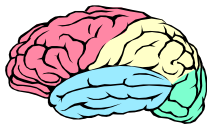
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- 11** What is the purpose of each of these types of neuron? **3**
- (a) sensory neuron
- (b) interneuron
- (c) motor neuron
-
- 12** What is the difference between a reflex arc and the pathway taken by other nerve signals? **2**
-
- 13** List one way in which: **2**
- a) the endocrine system is **similar** to the nervous system
- b) the endocrine system is **different** to the nervous system
-
- 14** Which of the endocrine system and nervous system usually acts more quickly? **1**
-
- 15** Neurons communicate to each other through the release of chemicals from the axon branch. What are these called? **1**
-
- 16** One well-known hormone is called the 'flight or fight' hormone because of the way it helps to protect your body in a dangerous situation? **4**
- (a) What is the name of the hormone?
- (b) Where is it produced?
- (c) What are two immediate effects of this hormone?
-
- 17** The hormones insulin and glucagon help control the blood glucose (sugar) levels in the body. Where are these hormones produced? **1**
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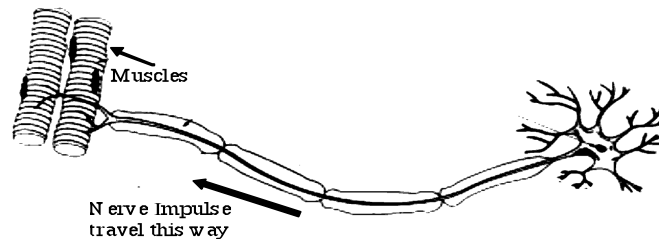
18 Describe the effect each of these hormones have on blood glucose levels. 2

- (a) Insulin
- (b) Glucagon

19 A chemical called auxin is produced in plants when light shines on the tips of its shoots. Explain with the aid of a diagram how this chemical makes the plant grow towards the sun. 2

20 Label this motor neuron with the following 2

- a) cell body
- b) dendrite
- c) axon
- d) axon branch



21 Many of the nerve fibres are covered with an insulating layer. 2

- a) What is this layer called?
- b) What is the role of this layer?

22 Label the following structures of the brain: 3

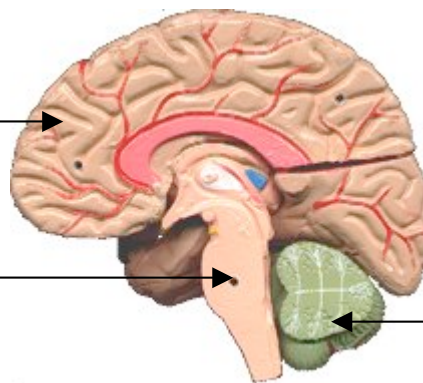
a)

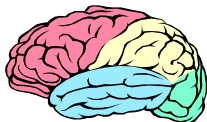


b)



c)





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- 23** List the major functions of each of the following structures of the brain:

3

Brain Region	Function
Cerebrum	
Brainstem	
Cerebellum	

- 24** Draw a flowchart/annotated diagram that outlines what happens when sit down on a chair that has a sharp object on it. (Include as many nervous and endocrine responses as you can!)

5

Section A: /8
Section B: /37

TOTAL MARKS: /45